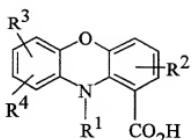


CLAIMS

What is claimed is:

1. A compound of the Formula I



I

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and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof,

wherein:

R<sup>1</sup> is hydrogen, lower alkyl, or cycloalkyl;

R<sup>2</sup> is hydrogen; lower alkyl, lower alkoxy, halogen, hydroxy, aryl,

heteroaryl, arylalkyl, heteroarylalkyl, arylalkoxy, heteroarylalkoxy, cyano, carboxy, alkoxy carbonyl, carbamoyl, sulfamoyl, nitro, trifluoromethyl, amino, or mono- or dialkylamino;

R<sup>3</sup> and R<sup>4</sup> independently are hydrogen, lower alkoxy, aryl, heteroaryl, halogen, hydroxy, cyano, carboxy, alkoxy carbonyl, carbamoyl, sulfamoyl, nitro, trifluoromethyl, amino, mono- or dialkylamino, or lower alkyl or lower alkenyl unsubstituted or substituted with one,

two or three groups independently selected from oxo, halogen, hydroxy, carboxy, carbamoyl, amino, mono- or dialkylamino, or

20 aryl or heteroaryl optionally substituted independently with up to three groups selected from halogen, lower alkyl, lower alkoxy, hydroxy, carboxy, alkoxy carbonyl, cyano, nitro, trifluoromethyl, amino, mono- or dialkylamino, carbamoyl, carboxy alkyl, alkoxy carbonyl alkyl, sulfamoyl, or carbonyl amino, or

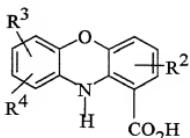
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R<sup>3</sup> and R<sup>4</sup> together form a carbocyclic group containing from five to seven members, up to two of which members are optionally heteroatoms selected from oxygen and nitrogen, where the carbocyclic group is optionally substituted with one or two groups selected from halogen, lower alkyl, lower alkoxy, mono- or dialkylamino, aryl, arylalkyl, or a heterocyclic group.

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2. A compound of the Formula II



10 and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof,

wherein:

15 R<sup>2</sup> is hydrogen, lower alkyl, lower alkoxy, halogen, hydroxy, aryl, heteroaryl, arylalkyl, heteroarylalkyl, arylalkoxy, heteroarylalkoxy, cyano, carboxy, alkoxy carbonyl, carbamoyl, sulfamoyl, nitro, trifluoromethyl, amino, or mono- or dialkylamino;

R<sup>3</sup> and R<sup>4</sup> independently are hydrogen, lower alkoxy, aryl, heteroaryl, halogen, hydroxy, cyano, carboxy, alkoxy carbonyl, carbamoyl, sulfamoyl, nitro, trifluoromethyl, amino, mono- or dialkylamino, or lower alkyl or lower alkenyl unsubstituted or substituted with one,

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two or three groups independently selected from oxo, halogen, hydroxy, carboxy, carbamoyl, amino, mono- or dialkylamino, or

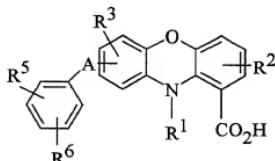
25 aryl or heteroaryl optionally substituted independently with up to three groups selected from halogen, lower alkyl, lower alkoxy, hydroxy, carboxy, alkoxy carbonyl, cyano, nitro, trifluoromethyl, amino, mono- or dialkylamino, carbamoyl,

100-1000-1000-1000

carboxyalkyl, alkoxy carbonyl alkyl, sulfamoyl, or carbonyl amino, or

R<sup>3</sup> and R<sup>4</sup> together form a carbocyclic group containing from five to seven members, up to two of which members are optionally heteroatoms selected from oxygen and nitrogen, where the carbocyclic group is optionally substituted with one or two groups selected from halogen, lower alkyl, lower alkoxy, mono- or dialkyl amino, aryl, arylalkyl, or a heterocyclic group.

3. A compound of the Formula III



and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof;

wherein:

A is absent, or is

lower alkyl or lower alkenyl unsubstituted or substituted with one or two groups independently selected from oxo, halogen, hydroxy, carboxy, carbamoyl, amino, mono- or dialkyl amino;

R<sup>1</sup> is hydrogen or lower alkyl;

R<sup>2</sup>, R<sup>5</sup>, and R<sup>6</sup> are independently hydrogen, lower alkyl, lower alkoxy, halogen, hydroxy, aryl, heteroaryl, arylalkyl, heteroarylalkyl, arylalkoxy, heteroarylalkoxy, cyano, carboxy, alkoxy carbonyl, carbamoyl, sulfamoyl, nitro, trifluoromethyl, amino, or mono- or dialkyl amino; and

R<sup>3</sup> is hydrogen, lower alkoxy, aryl, heteroaryl, halogen, hydroxy, cyano, carboxy, alkoxy carbonyl, carbamoyl, sulfamoyl, nitro, trifluoromethyl, amino, mono- or dialkyl amino, or

lower alkyl or lower alkenyl unsubstituted or substituted with one,

two or three groups independently selected from oxo,

halogen, hydroxy, carboxy, carbamoyl, amino, mono- or dialkylamino, or

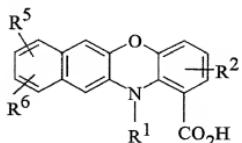
5 aryl or heteroaryl optionally substituted independently with up to

three groups selected from halogen, lower alkyl, lower alkoxy, hydroxy, carboxy, alkoxy carbonyl, cyano, nitro,

trifluoromethyl, amino, mono- or dialkylamino, carbamoyl, carboxy alkyl, alkoxy carbonyl alkyl, sulfamoyl, or

10 carbonyl amino.

4. A compound of the formula



and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof,

wherein:

R<sup>1</sup> is hydrogen or lower alkyl; and

R<sup>2</sup>, R<sup>5</sup>, and R<sup>6</sup> are independently hydrogen, lower alkyl, lower alkoxy,

halogen, hydroxy, aryl, heteroaryl, arylalkyl, heteroarylalkyl,

aryalkoxy, heteroarylalkoxy, cyano, carboxy, alkoxy carbonyl,

20 carbamoyl, sulfamoyl, nitro, trifluoromethyl, amino, or mono- or dialkylamino.

5. A compound according to Claim 1, which is selected from:

Phenoxyazinecarboxylic acid;

3-Nitro phenoxyazinecarboxylic acid;

3-(Phenylmethoxy) phenoxyazinecarboxylic acid;

9-Chloro-8-(trifluoromethyl)benzo[b]phenoxyazinecarboxylic acid;

25 Benzo[b]phenoxyazinecarboxylic acid;

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8,9-Dimethylbenzo[b]phenoxyazinecarboxylic acid;  
8,9-Dihydroxybenzo[b]phenoxyazinecarboxylic acid;  
8,9-Dichlorobenzo[b]phenoxyazinecarboxylic acid;  
7-Phenylphenoxyazinecarboxylic acid;  
5 7-(3,4-Dichlorophenyl)phenoxyazinecarboxylic acid;  
7-Benzylphenoxyazinecarboxylic acid;  
7-[3,4-Dichlorophenyl)methyl]phenoxyazinecarboxylic acid;  
7-[2-(3,4-Dichlorophenyl)ethyl]phenoxyazinecarboxylic acid;  
8-(3,4-Dichlorophenyl)phenoxyazinecarboxylic acid;  
10 3-Nitrobenzo[b]phenoxyazinecarboxylic acid;  
3-Nitro-8-phenylphenoxyazinecarboxylic acid;  
7-[2-(3,4-Dichlorophenyl)ethyl]-3-nitrophenoxyazinecarboxylic acid;  
7-[3-(3,4-Dichlorophenyl)-3-oxoprop-1-enyl]-  
3-nitrophenoxyazinecarboxylic acid;  
15 7-[3-(3,4-Dichlorophenyl)propyl]-3-nitrophenoxyazine carboxylic acid;  
7-[3-(3,4-Dichlorophenyl)-3-hydroxypropyl]-3-nitrophenoxyazine  
carboxylic acid; and  
3-Amino-7-[3-(3,4-dichlorophenyl)propyl]phenoxyazine carboxylic acid.

20 6. A method of treating Alzheimer's disease, the method comprising  
administering to a patient having Alzheimer's disease a therapeutically  
effective amount of a compound of Claim 1.

25 7. A method of inhibiting the aggregation of amyloid proteins to form  
amyloid deposits, the method comprising administering to a patient in  
need of inhibition of the aggregation of amyloid protein an amyloid  
protein aggregation inhibiting amount of a compound of Claim 1.

30 8. A method of imaging amyloid deposits, the method comprising:  
a. introducing into a patient a detectable quantity of a labeled  
compound according to Claim 1;  
b. allowing sufficient time for the labeled compound to become  
associated with amyloid deposits; and

- c. detecting the labeled compound associated with the amyloid deposits.
- 9. The method of Claim 10 wherein the patient has or is suspected to have Alzheimer's disease.
- 5 10. The method of Claim 10 wherein the labeled compound is a radio labeled compound.
- 11. The method of Claim 10 wherein the labeled compound is detected using MRI.

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